

The Historical Background of the Teaching Hospital in the United States

CHARLES E. BURBRIDGE, Ph.D.

Superintendent, Freedmen's Hospital, Washington, D. C.

IT appears entirely appropriate and necessary in treating, even briefly, the history and development of the teaching hospital in the United States, to go back as far as possible into related history so that this important institution in our society might be viewed in proper perspective. First, however, it might be well to define a teaching hospital. Henry S. Houghton, best describes the type of institution referred to in this paper:¹

The term teaching hospital . . . indicates an institution owned, or attached to, or affiliated with a medical school in which formal undergraduate clinical courses are taught. This is a narrow phrasing, for many hospitals unrelated to schools or universities perform important teaching functions in the training of house officers, and should be held responsible to some standardizing agency for the quality of their educational work.

In the narrow definition that I have used, however, a teaching hospital may be a public or private institution and the college or university through which its teaching work is done will have an association with it that may vary all the way from remote courtesy to complete ownership and control.

Hippocrates' famous words, in referring to medicine, "Where there is love for humanity, there is also love for the art," may be paraphrased and, in capsule, refer to the whole developmental history of institutions of healing: "Where there is civilization, there will always be hospitals to care for those who need their services."

Actually, no real distinction can be drawn between the development of the modern hospital, on the one hand, and clinical medicine and medical education, on the other. Clinical medicine, represented by its teaching, practice, and research; found its inception and has made most of its advances in the hospital; each, clinical medicine and the hospital, growing more competent in fulfilling the needs of the other. The art and science of medicine have increasingly required finer equipment, more adjunct services and personnel; and the hospital, as a basic community institution, has made more and more demands upon medicine's knowledge and skills to cope with the treatment of sickness and trauma and the prevention of disease.

However, the most important stimulus in this parallel development has not been the cycle of interaction and response that has been operating between medicine and the institutional medium in which it grows, but a far more fundamental motivation—man's ageless egoistic and altruistic drives to better the physical lot of himself and his fellow.

Robinson² orients the origin of medicine in the two billion years of the Earth's existence probably as accurately as history will permit when he says the first cry of pain through the primitive jungle was the first call for a physician.

Early man moistened his wounds with saliva, he extracted the thorns that lodged in his flesh, he used the pointed stick to dig sandfleas from his skin, he put leaves or mud or clay on his wounds, he tasted herbs and some he spat out and some he swallowed, he was rubbed or stroked when in pain, his broken bones were splinted with branches, and when bitten by a venomous animal he sucked the poison from his body or his fellow did it for him. Medicine is a natural art, conceived in sympathy and born of necessity; from these instinctive procedures developed the specialized science that is practiced today.

Similarly, the hospital idea, the centralization, for the purpose of care, of persons no longer functional in society by reason of sickness or accident, was conceived in sympathy and born of necessity. The ancient temples of health in India and Egypt were ecclesiastical expressions of a feeling of religious obligation toward the sick and homeless, while the military hospitals of Rome were an expedient for the armies in the field.

What and where was the first hospital of antiquity? As in the case of medicine, there is no accurate record upon which a factual statement can be made. Several references can be found in the literature of the medical and surgical procedures practiced in the ancient civilizations of Mesopotamia, which may infer a period between 5,000 and 6,000 B.C. Singer says: "Moreover, there was in Mesopotamia a standardization of both medical and surgical procedures. . . ."³ It might be conjectured that these procedures were practiced in an institution of healing. Stubbs and Bligh make a somewhat similar statement but add that details

of medical practice could be found only of the time of Hammurabi (c.1950 B.C.).⁴ However, in placing the origin of the hospital and of medicine, too, for that matter, we are on sounder ground if we select Egypt, the medical history of which does offer as record the three medical papyri: the Ebers Papyrus (1550 B.C.), the Harris Papyrus and the Berlin Papyrus. In commenting on early medical history in Egypt, one source says:⁵

The Egyptians made great advances in Medicine. Their priests who acted as interpreters between the gods and men, approved of the opening of dead bodies to ascertain the cause of death and this also had the sanction of their kings. The germ of a hospital system may be found here also as there were in the eleventh century B.C. official houses to which the poor went at certain times, apparently corresponding to our Out-Patient Departments. There was also a college of surgeons, supported by the state which regulated the nature and extent of the practice of medicine. The college belonged to the sacerdotal caste. Women were allowed to practice medicine. According to Pliny, as these physicians were paid by the state they were required to treat the poor gratuitously. This they did in official houses "or hospitals" rather than in the homes of the poor or in the physician's consulting room.

This would certainly indicate the early relationship between the medical school and the hospital. However, because of the magical and mystical flavor of Egyptian medicine, these practices and institutions could hardly be considered the beginnings of rational medicine and the modern teaching hospital. Traumatic surgery may have found its inception here through the repair of wounds and fractures but other illnesses were treated by incantations and spells. The temples were not as much treatment centers as they were havens of rest. For this reason, many writers assert that rational medicine began in Greece with Hippocrates and Galen and the hospital system with the Romans.

It has been said that the three major factors contributing to the development of hospitals have been war, religion, and advance in scientific medicine. History gives ample support of this truism.

War, without doubt, has exerted a profound influence. Roman soldiers in early campaigns were sent home for treatment. As the Roman frontiers spread even wider this became impossible and hospitals were founded at important strategic points. The sites of several such military hospitals have been excavated. The best explored is at Dusseldorf, which was founded about 100 A.D.⁶ In

organization and construction, the *iatreia* (surgeries) and *valetudinaria* (infirmaries) of that period are a tribute to the genius of the Romans. Incongruous as it may seem, down through the ages each war, with its deadly purpose of decimating men, has in large degree contributed to the development of the institution which has as its purpose the saving of life.

Religion's contribution is measured in human values. As Nathaniel W. Faxon puts it, "Christianity produced a new spirit of compassion toward the sick."⁷ Or, as Fielding H. Garrison says,

While the germ of the hospital idea may have existed in the ancient Babylonian custom of bringing the sick into the market place for consultation and while the *aesculapia* and *latreia* of the Greeks and Romans may have served this purpose to some extent, the spirit of antiquity toward sickness and misfortune was not one of compassion and the credit for ministering to human suffering on an extended scale belongs to Christianity.⁷

Thus we have war providing the seed of organization and structure of the hospital and religion the spiritual undergirding so necessary to the humane care of the sick. What of medical science?

Medical science and the hospital are indivisible; they are interdependent. Stern⁸ has the following to say concerning the contribution of one to the other:

The high standards attained by the medical professions would have been impossible without the development of the modern hospital which gave the physician practical experience to enrich his theoretical training. The value of hospitals in the development of medical skill has only recently been understood. The growth of the hospital is as dependent upon medical progress as medical progress is upon the hospital. Ability to control puerperal, typhus and other fevers was necessary before hospitals could begin to lose their reputations of being vestibules of death. The discovery of anesthesia increased the use of hospitals. Yet only when asepsis was introduced did hospitals cease to provoke terror in prospective patients and become gradually the central and strategic factor in medical care and medical education.

Thus far, an attempt has been made to place the origin of the hospital and to establish the major factors influencing and stimulating its development. From this point in time, the hospital has marched arm in arm with civilization from Rome to England, France, Germany, Spain, Italy, Arabia, to America.⁹ It cannot be said that this sojourn was always characterized by a constant improvement and that each era brought forth hospitals superior to their predecessors. In fact, there were

times in the evolution of the hospital when progress seemed to stop and the movement to have regressed. The dark age of the human race in Europe was the dark age of the hospital. Medicine was, for the most part, witchcraft and the institutions of health were far below the standards of earlier hospitals. The hospital is truly a creature of the environment. Even as Europe and many of its hospitals groped in darkness, the great Al Mansur Hospital at Cairo reflected the sanity of Egyptian culture of the 13th century. Several great hospitals such as St. Bartholomew's and St. Mary's in England were founded during and survived this period in Europe and were ready to serve as the foundation upon which to build again at the advent of the Renaissance. About this time the health movement was beginning to stir in America.

In shifting the scene from Europe to the Western Hemisphere, we see the Pennsylvania Hospital (1751) as the earliest hospital to be established in the United States; the first hospital in the Americas being an institution founded by Cortez in Mexico City in 1524 to care for his soldiers. During the almost 150 years between the landing of the Pilgrims and the founding of the Pennsylvania Hospital, there were practically no facilities and personnel for health in this country. In writing of those times, Packard says, "None of the physicians stayed long in the colony, for in 1609 Captain Smith was injured and was obliged to return to England for surgical treatment. For there was neither surgeon nor surgery at the fort (Jamestown, Virginia)."¹⁰ However, after the establishment of the Pennsylvania Hospital and subsequently, hospitals in other cities, medical education began to emerge and in the late 18th and early 19th centuries we find physicians being produced in this country. Formerly, members of the medical profession were entirely of European origin either by birth or medical training or both. As Packard said, "The sources of the strength of American medicine are to be found in the studies pursued abroad in Great Britain, France, Holland, and later in Germany, by the young men who subsequently occupied teaching or laboratory positions in our young medical colleges."¹⁰

Although it is undeniably true that American medicine came from Europe and the new hospitals in this country were strongly influenced by ones abroad, particularly in England, the health move-

ment in this country, when it finally gained momentum in the latter part of the 19th century, was primarily an indigenous phenomenon. The teaching hospital, as the focus of service and education, found its inception in the early hospitals that were part of or served university medical education programs. Probably the best means of tracing their evolution is to follow the development of the American medical colleges.

Pennsylvania, which gave us the first hospital, also produced the first medical facility in the United States at the College of Philadelphia in 1765.¹¹ This was later to become the University of Pennsylvania. King's College of New York, in 1768, added a medical department which, though broken up during the war with England, was revived in 1814 and merged with the College of Physicians and Surgeons and eventually was incorporated into Columbia University. Other medical colleges soon appeared; Harvard in 1783; Dartmouth in 1798; and Yale in 1810. These first schools were of high calibre but unfortunately stimulated the growth of a number of inferior institutions. It has been estimated that in the one hundred years between 1810 and 1910 no less than 400 medical schools were opened; many of them going out of existence even before graduating a class. At the turn of the century, there were 155 schools in operation. In less than 60 years, the number has been decreased by more than half, to 75, and the quality of teaching increased a hundredfold.

Many factors have contributed to this refining process, chief among which were state licensure of practitioners beginning in New Jersey in 1772; the American Medical Association, organized in 1847; and the Abraham Flexner report on medical education in 1910.

Although the trend toward state licensure of physicians began early, it was not until 1895 that practically every state had a board of medical examiners. State examinations raised the standards of medical colleges by requiring of their graduates not only an extensive knowledge of the main fields of medicine but also of the basic sciences such as anatomy, pathology, physiology, and pharmacology. Although an exceptional student from a poor school might be well tutored and manage to pass the state examination, by and large, a medical college had to offer an adequate educa-

tional program in order to maintain a high percentage of graduates receiving licenses, a desirable condition upon which depended its continued existence.

Several years passed after the founding of the American Medical Association in 1847 before it became the potent influence in the medical field that it is today. Its first emphasis was upon medical education reforms and the improvement of professional standards. However, as the American College of Surgeons was to discover later, the American Medical Association soon came to learn that little could be done in promoting the improvement of professional standards and medical education without establishing the hospital as a frame of reference. Out of this realization has grown the hospital registration and accreditation programs, the most recent one (1952) being the Joint Commission on Accreditation of Hospitals composed of representation from the American College of Physicians, American College of Surgeons, American Hospital Association, American Medical Association and Canadian Medical Association.

State licensure and the American Medical Association brought about gradual, permanent reforms but the Flexner report, sponsored by the Carnegie Foundation, when published in 1910, had almost immediate results in weeding out many of the inferior colleges. Its merciless criticisms of the abuses of many of the medical schools of that time were only slightly softened by the constructive suggestions offered for reform. The impact of the report can be easily discerned in the decrease in the number of schools from 148 in 1910 to 107 in 1914.

Many of the early schools had neither hospital nor university connections and were mainly diploma mills created solely to capitalize on the popular upsurge in medical education. However, the

better schools that have survived to this day soon realized the indispensability of a hospital affiliation and took steps to avail themselves of such facilities. Thus we see three professors of King's College in New York in 1776 founding a hospital to enhance the medical education program. For the same purpose, the Harvard Medical School moved from Cambridge to Boston in 1807 in order to be near a hospital.¹¹ Today, it is axiomatic that the medical college should be located in a university setting and have one or more hospitals at its disposal to implement the clinical teaching of medical students.

In the course of the years, the teaching hospital has developed into one of society's most important institutions and as such has consequently assumed a dominant role of leadership in the health field, fusing its dual purpose of education and caring for the sick into the single objective of improving the health of all the people.

LITERATURE CITED

1. HOUGHTON, H. S. *Bulletin of the American Hospital Association*, v. 8, p. 39, 1934.
2. ROBINSON, V. *The Story of Medicine*, p. 1, 1931.
3. SINGER, C. J. *A Short History of Medicine*, p. 7, 1928.
4. STUBBS, S. G. B. and E. W. BLIGH, *Sixty Centuries of Health and Physick*, p. 12, 1931.
5. BACHMEYER, A. C. and G. HARTMAN, *The Hospital in Modern Society*, p. 5, 1943.
6. SINGER, C. J. *A Short History of Medicine*, p. 50, 1928.
7. BACHMEYER, A. C. and G. HARTMAN, *The Hospital in Modern Society*, pp. 4, 7, 1943.
8. STERN, B. J. *Society and Medical Progress*, p. 14, 1941.
9. MACEACHERN, M. T. *Hospital Organization and Management*, p. 25, 1946.
10. PACKARD, F. R. *History of Medicine in the United States*, v. 1, p. 9, 1931.
11. SINGER, H. E. *American Medicine*, pp. 131, 132, 1934.

LIFE SPAN OF METROPOLITAN INDUSTRIAL POLICY HOLDERS INCREASED

The average length of life among the industrial policyholders of the Metropolitan Life Insurance Company rose to a new high of 70.2 years in 1956. This is slightly above the figure for 1955 and represents an increase of 24 years since 1909.

For nearly two generations, the average length of life has been increasing more rapidly among American wage earners and their families than for the general population of the United States. In 1909, the average lifetime of the Metropolitan's industrial policyholders was about six years less than that for the population as a whole. Since then, the disparity has been narrowing; at present the two groups are on a par.